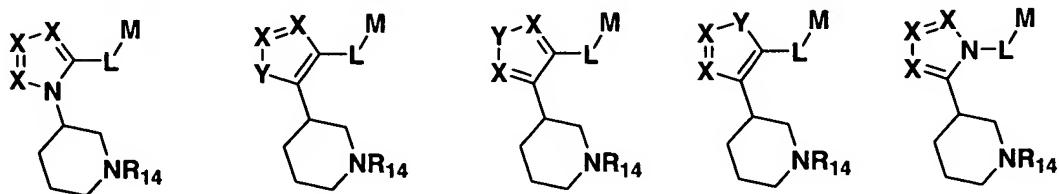


What is claimed is:

1. A compound comprising a formula selected from the group consisting of:



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

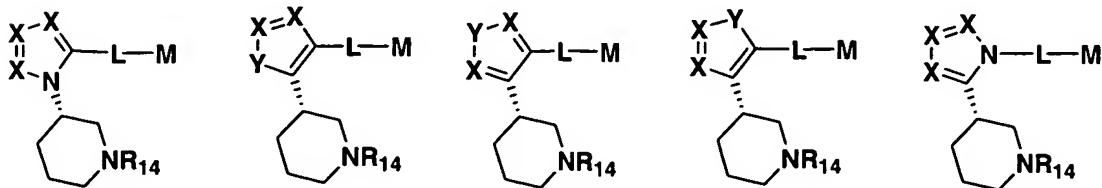
each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case where the ring atom to which R<sub>12</sub> is bound is nitrogen;

R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

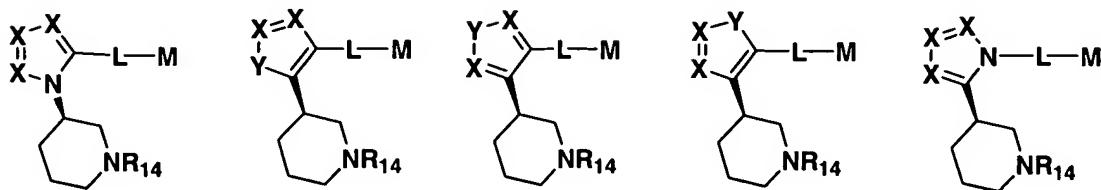
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between M and the ring.

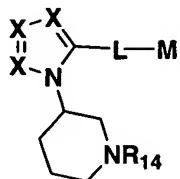
2. A compound according to claim 1, wherein the compound comprises a formula selected from the group consisting of



3. A compound according to claim 1, wherein the compound comprises a formula selected from the group consisting of



4. A compound according to claim 1, wherein the compound comprises the formula



5. A compound according to claim 1, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

6. A compound according to claim 1, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

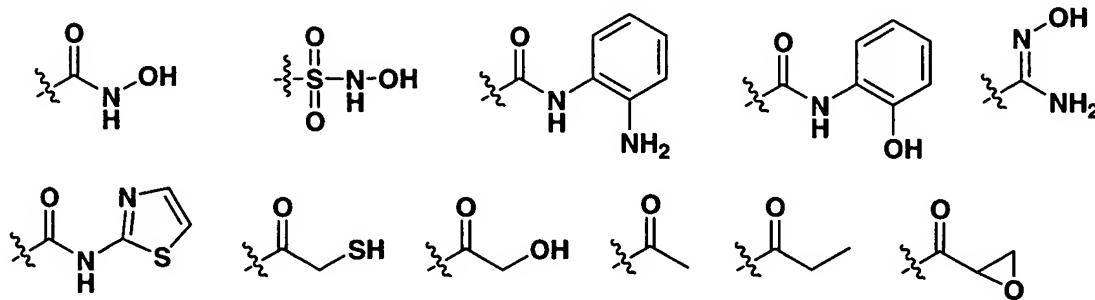
7. A compound according to claim 1, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

8. A compound according to claim 1, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

9. A compound according to claim 1, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having

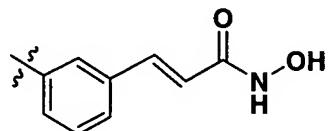
the formula  $-C(O)-R_{13}$  wherein  $R_{13}$  is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

10. A compound according to claim 1, wherein M is selected from the group consisting of:



11. A compound according to claim 1, wherein M comprises a hydroxamic acid moiety.

12. A compound according to claim 1, wherein -L-M is

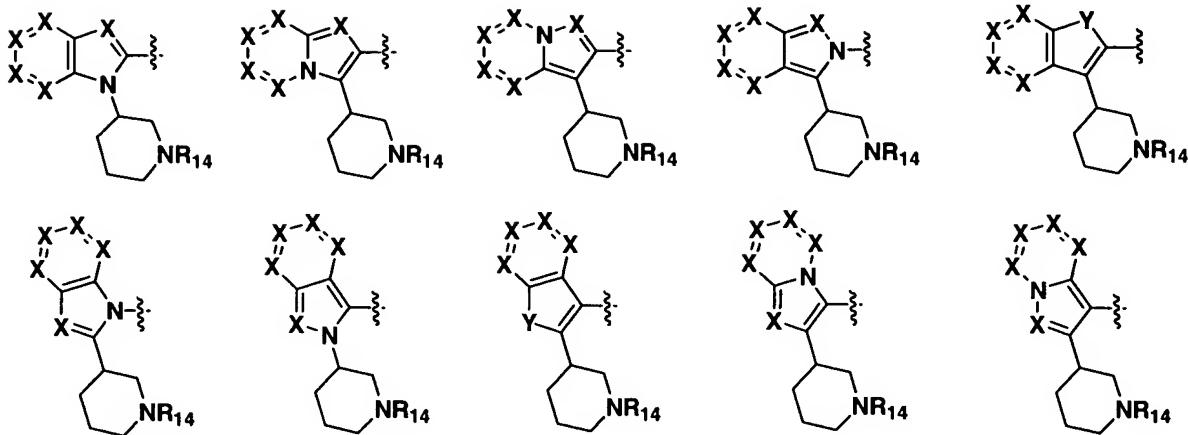


13. A compound comprising the formula



wherein

Z is selected from the group consisting of



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and  $NR_{12}$ ;

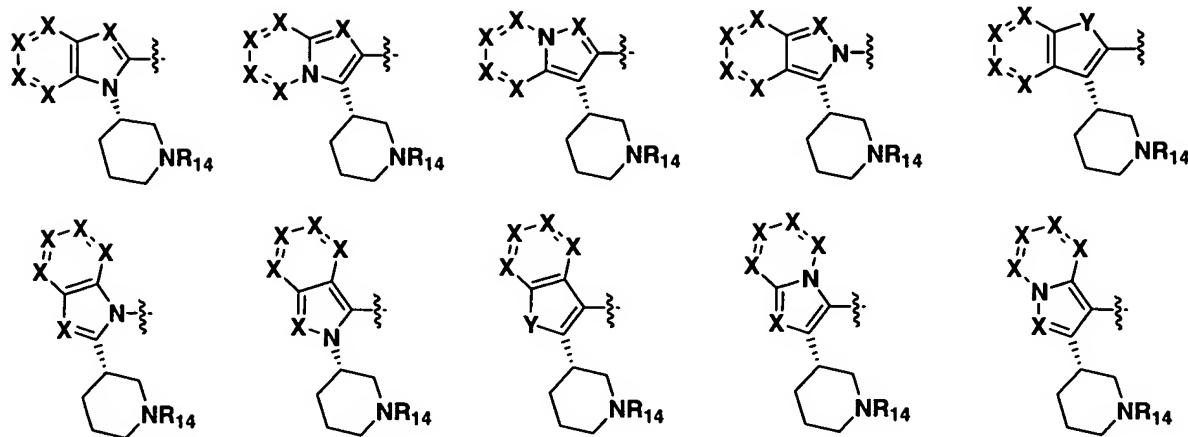
each  $R_{12}$  is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that  $R_{12}$  is not halo, cyano, nitro, and thio in the case where the ring atom to which  $R_{12}$  is bound is nitrogen;

$R_{14}$  is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

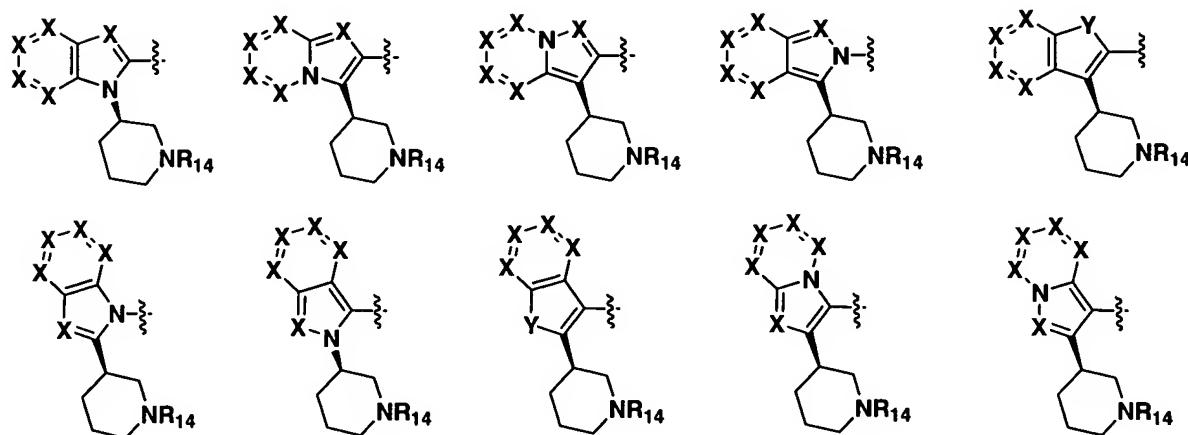
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between M and the ring.

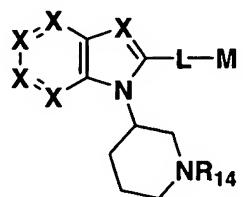
14. A compound according to claim 13, wherein the compound comprises a formula selected from the group consisting of



15. A compound according to claim 13, wherein the compound comprises a formula selected from the group consisting of

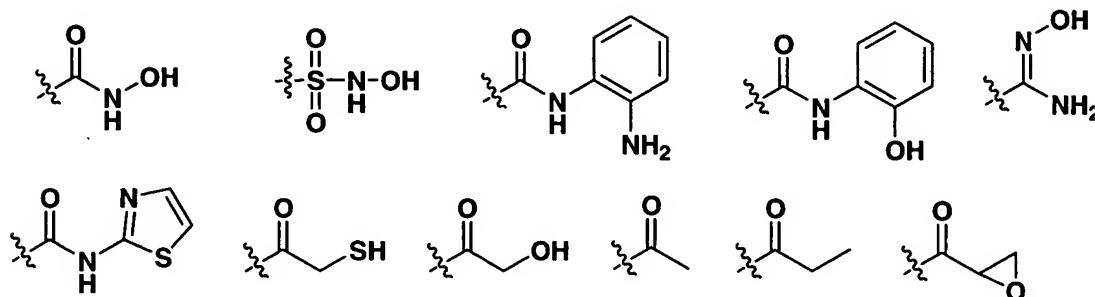


16. A compound according to claim 13 wherein the compound comprises the formula

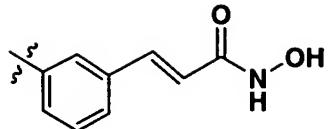


17. A compound according to claim 13, wherein R14 comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

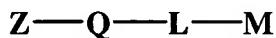
18. A compound according to claim 13, wherein  $R_{14}$  is a substituted or unsubstituted  $C_{1-6}$  alkyl.
19. A compound according to claim 13, wherein  $R_{14}$  is a substituted or unsubstituted  $-C(O)C_{1-6}$  alkyl.
20. A compound according to claim 13, wherein  $R_{14}$  is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.
21. A compound according to claim 13, wherein M comprises a member selected from the group consisting of trifluoroacetyl ( $-C(O)-CF_3$ ),  $-NH-P(O)OH-CH_3$ , sulfonamides ( $-SO_2NH_2$ ), hydroxysulfonamides ( $-SO_2NHOH$ ), thiols(-SH), and carbonyl groups having the formula  $-C(O)-R_{13}$  wherein  $R_{13}$  is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.
22. A compound according to claim 13, wherein M is selected from the group consisting of:



23. A compound according to claim 13, wherein M comprises a hydroxamic acid moiety.
24. A compound according to claim 13, wherein  $-L-M$  is

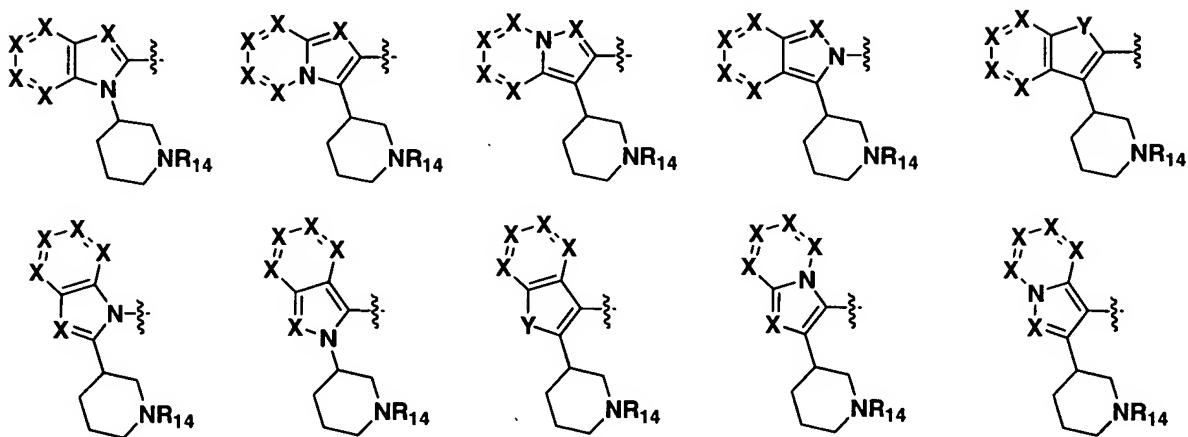


25. A compound comprising the formula



wherein

Z is selected from the group consisting of



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case where the ring atom to which R<sub>12</sub> is bound is nitrogen;

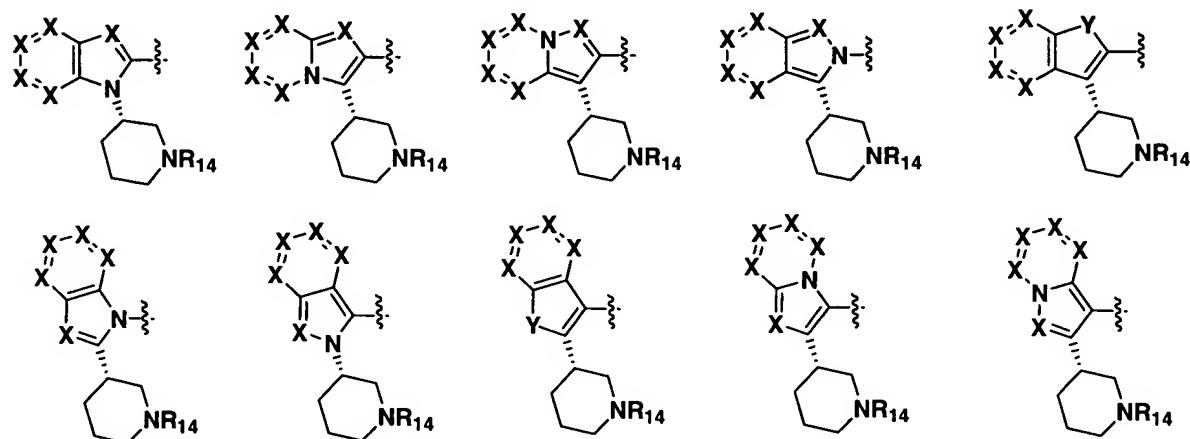
R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

Q is a substituted or unsubstituted aromatic ring;

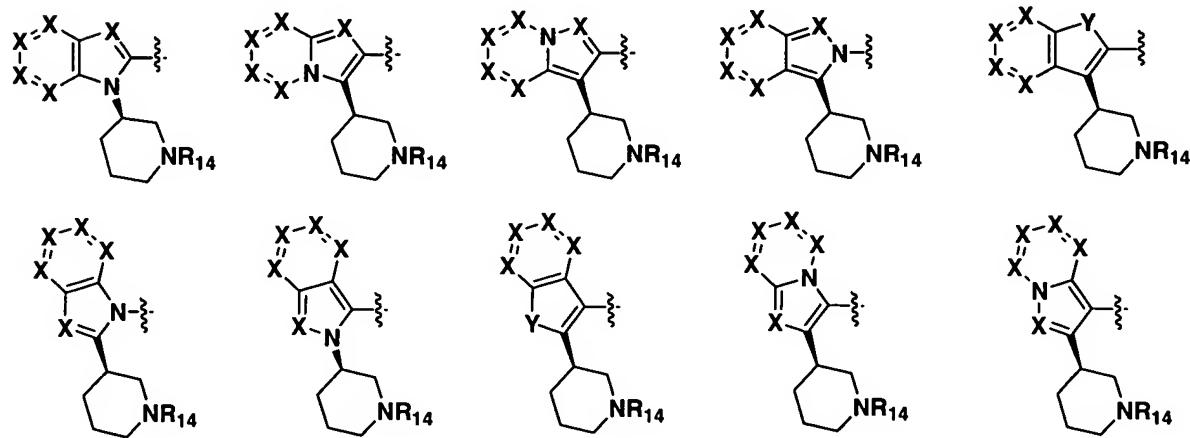
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between the M substituent and the Q substituent.

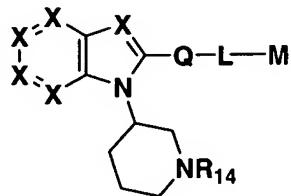
26. A compound according to claim 25, wherein the compound comprises a formula selected from the group consisting of



27. A compound according to claim 25, wherein the compound comprises a formula selected from the group consisting of



28. A compound according to claim 25, wherein the compound comprises the formula



29. A compound according to claim 28, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

30. A compound according to claim 28, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

31. A compound according to claim 28, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

32. A compound according to claim 28, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

33. A compound of claim 25, wherein Q is a substituted or unsubstituted phenyl ring.

34. A compound of claim 25, wherein Q is a substituted or unsubstituted heteroaryl.

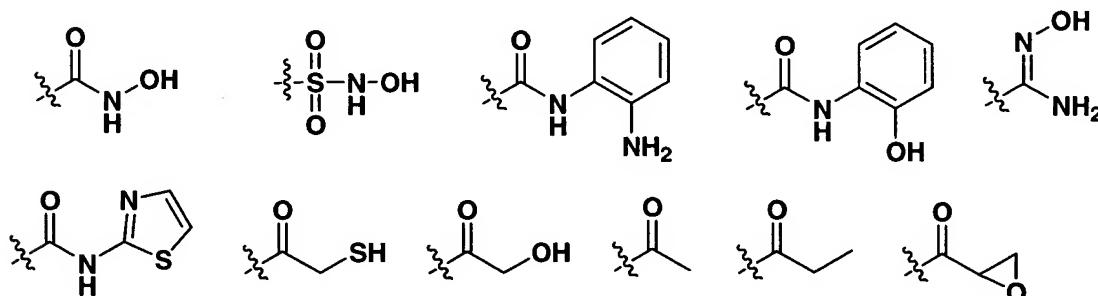
35. A compound of claim 25, wherein Q is a substituted or unsubstituted heteroaryl selected from the group consisting of furan, thiophene, pyrrole, pyrazole, triazole, isoxazole, oxazole, thiazole, isothiazole, oxadiazole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, benzofuran, isobenzofuran, benzothiophene, isobenzothiophene, indole, isobenzazole, quinoline, isoquinoline, cinnoline, quinazoline, naphthyridine, pyridopyridine, quinoxaline, phthalazine, benthiazole, and triazine.

36. A compound according to claim 25, wherein at least one X in the six membered ring is a substituted carbon atom.

37. A compound according to claim 25, wherein at least one of the X substituents in the six membered ring is -CF<sub>3</sub>.

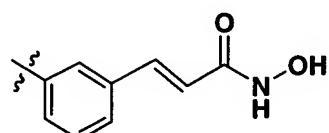
38. A compound according to claim 25, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

39. A compound according to claim 25, wherein M is selected from the group consisting of:



40. A compound according to claim 25, wherein M comprises a hydroxamic acid moiety.

41. A compound according to claim 25, wherein -Q-L-M is

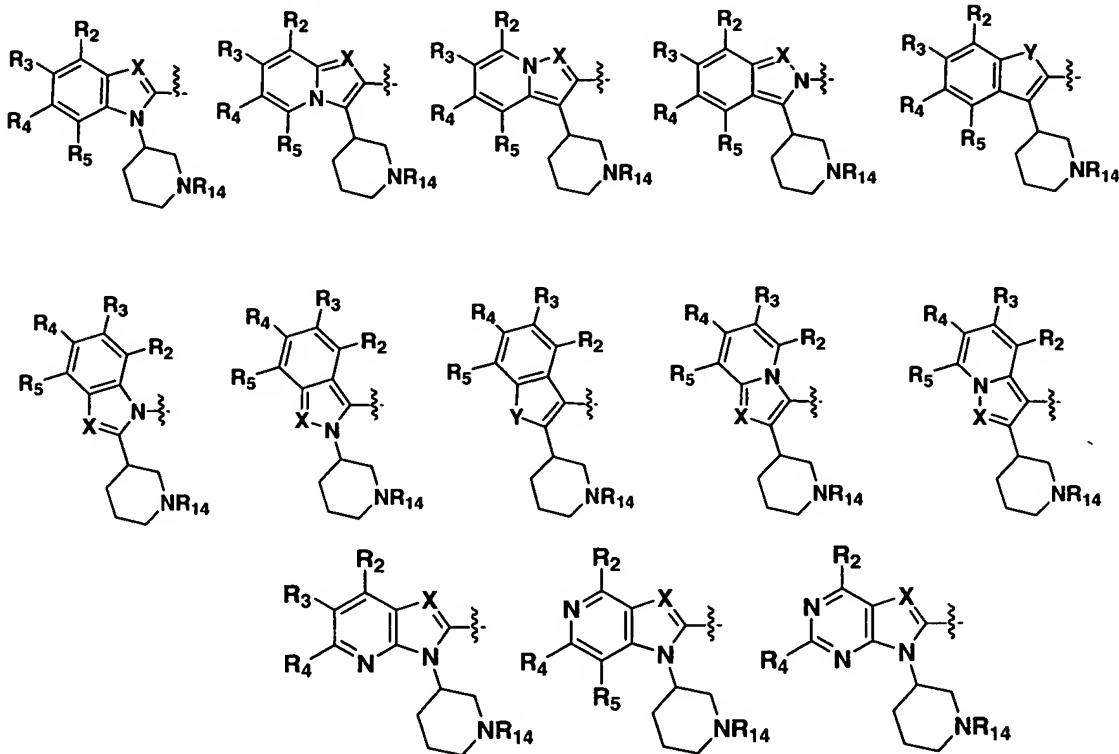


42. A compound comprising the formula

Z—Q—L—M

wherein

Z is selected from the group consisting of



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted; and

each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case

where the ring atom to which R<sub>12</sub> is bound is nitrogen;

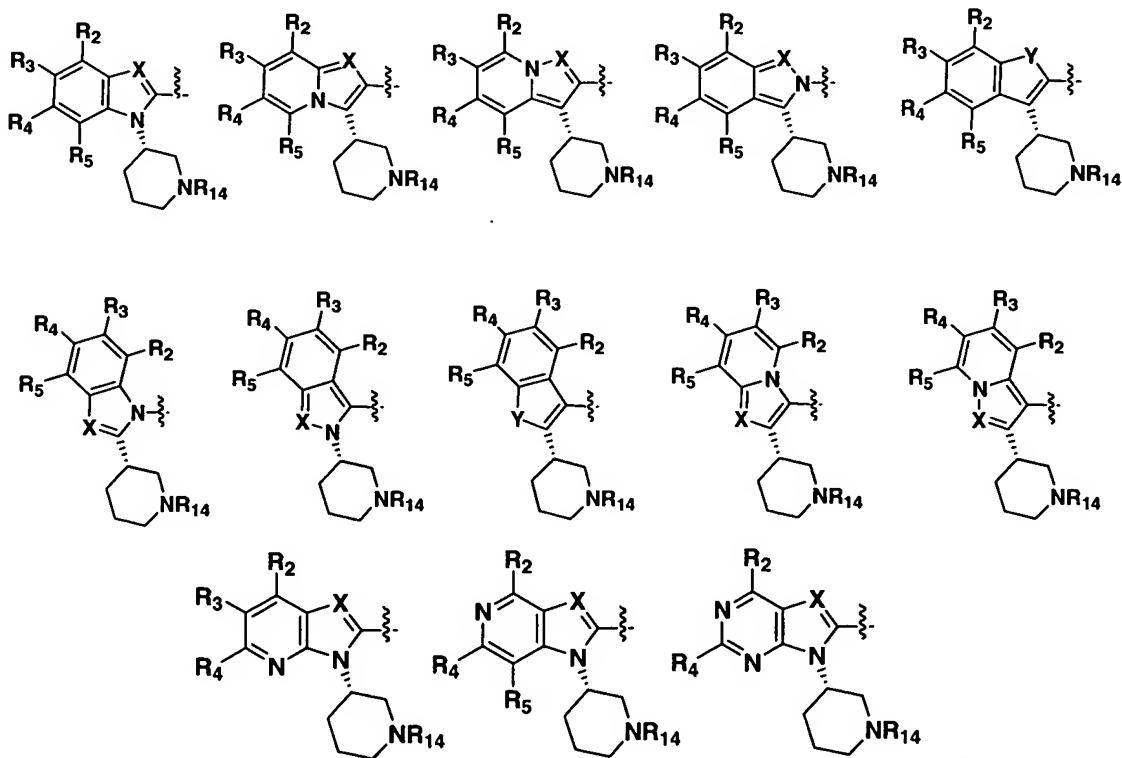
R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

Q is a substituted or unsubstituted aromatic ring;

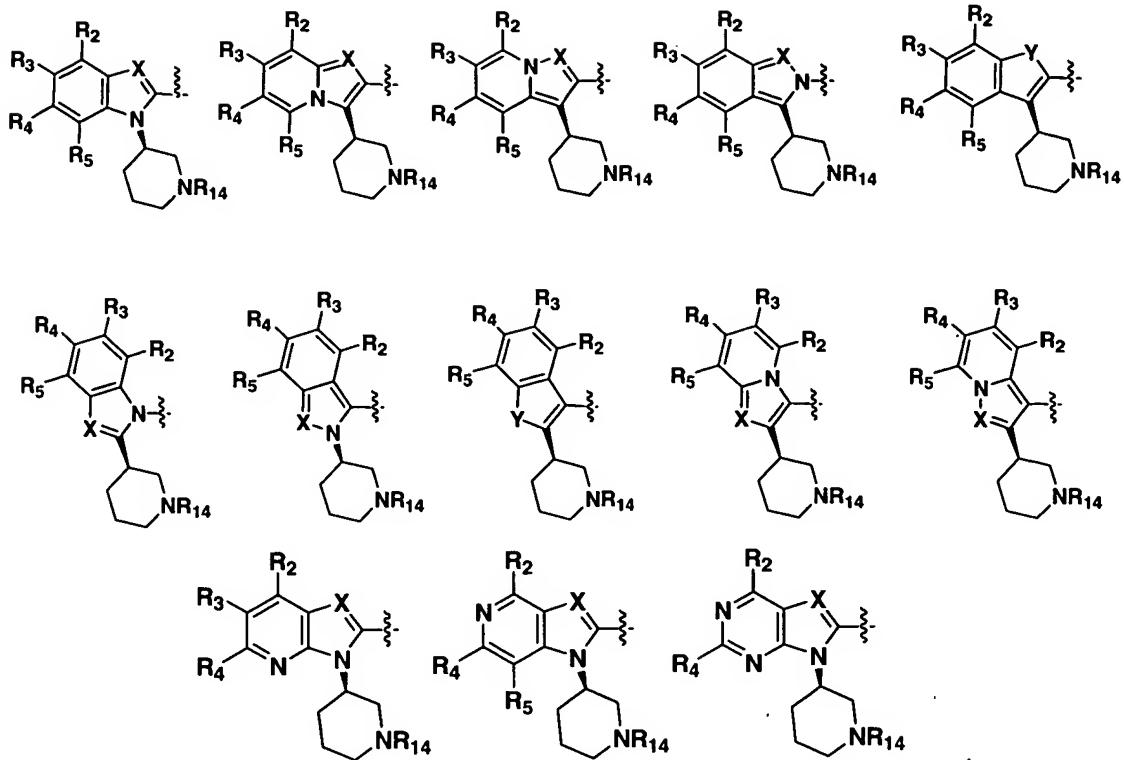
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between the M substituent and the Q substituent.

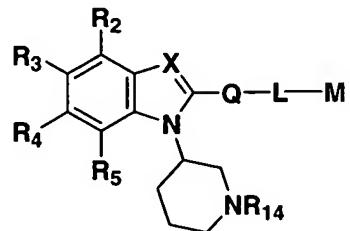
43. A compound according to claim 42, wherein the compound comprises a formula selected from the group consisting of



44. A compound according to claim 42, wherein the compound comprises a formula selected from the group consisting of



45. A compound according to claim 42, wherein the compound comprises the formula



46. A compound according to claim 42, wherein R14 comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

47. A compound according to claim 42, wherein R14 is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

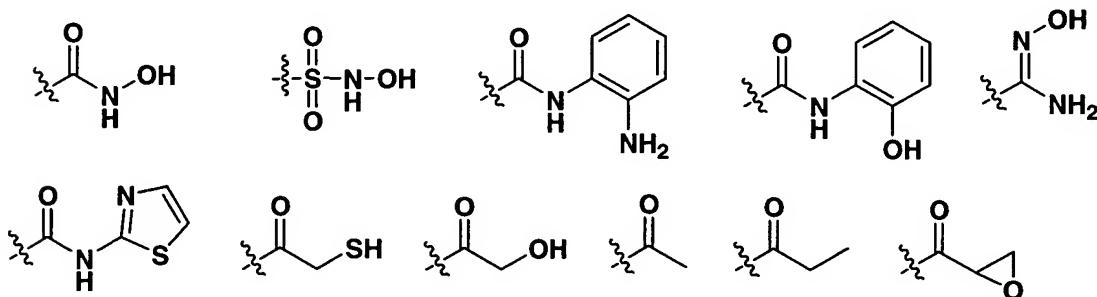
48. A compound according to claim 42, wherein R14 is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

49. A compound according to claim 42, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

50. A compound according to claim 42, wherein at least one of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, or R<sub>5</sub> is fluorine.

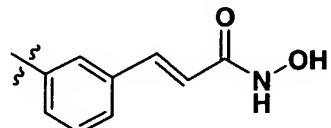
51. A compound according to claim 42, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

52. A compound according to claim 42, wherein M is selected from the group consisting of:

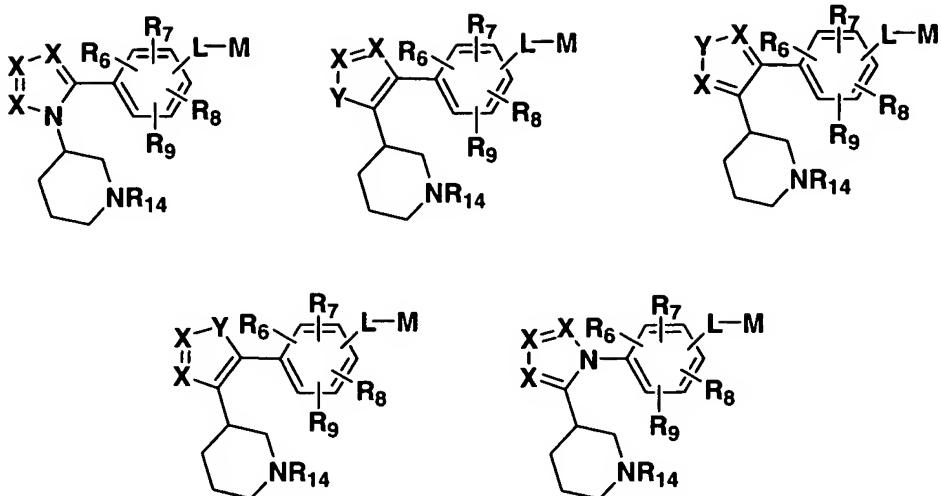


53. A compound according to claim 42, wherein M comprises a hydroxamic acid moiety.

54. A compound according to claim 42, wherein -Q-L-M is



55. A compound comprising a formula selected from the group consisting of:



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted;

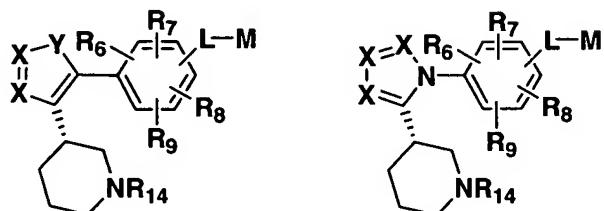
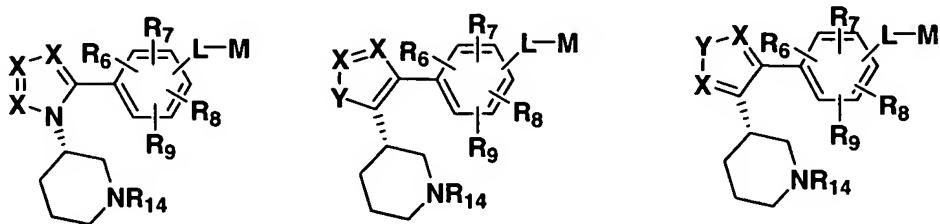
each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case where the ring atom to which R<sub>12</sub> is bound is nitrogen;

R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

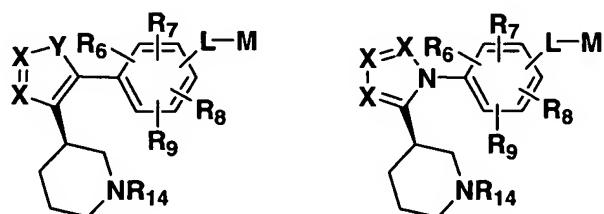
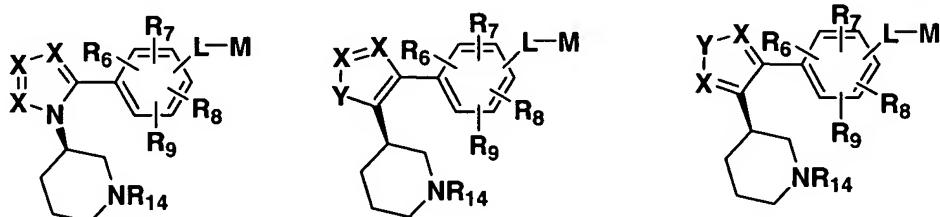
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between the M substituent and the ring.

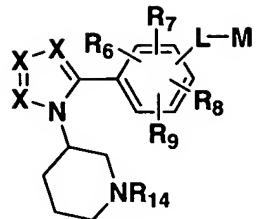
56. A compound according to claim 55, wherein the compound comprises a formula selected from the group consisting of



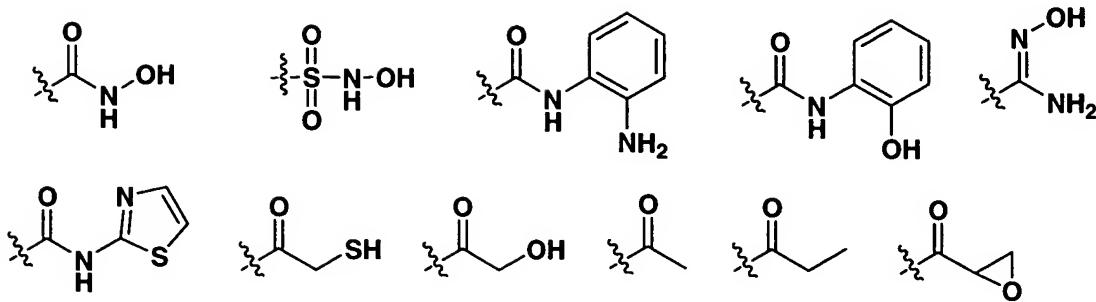
57. A compound according to claim 55, wherein the compound comprises a formula selected from the group consisting of



58. A compound according to claim 55, wherein the compound comprises the formula

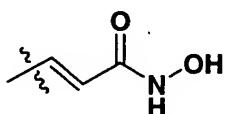


59. A compound according to claim 55, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.
60. A compound according to claim 55, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.
61. A compound according to claim 55, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.
62. A compound according to claim 55, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.
63. A compound according to claim 55, wherein at least one of R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> is fluorine.
64. A compound according to claim 55, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.
65. A compound according to claim 55, wherein M is selected from the group consisting of:

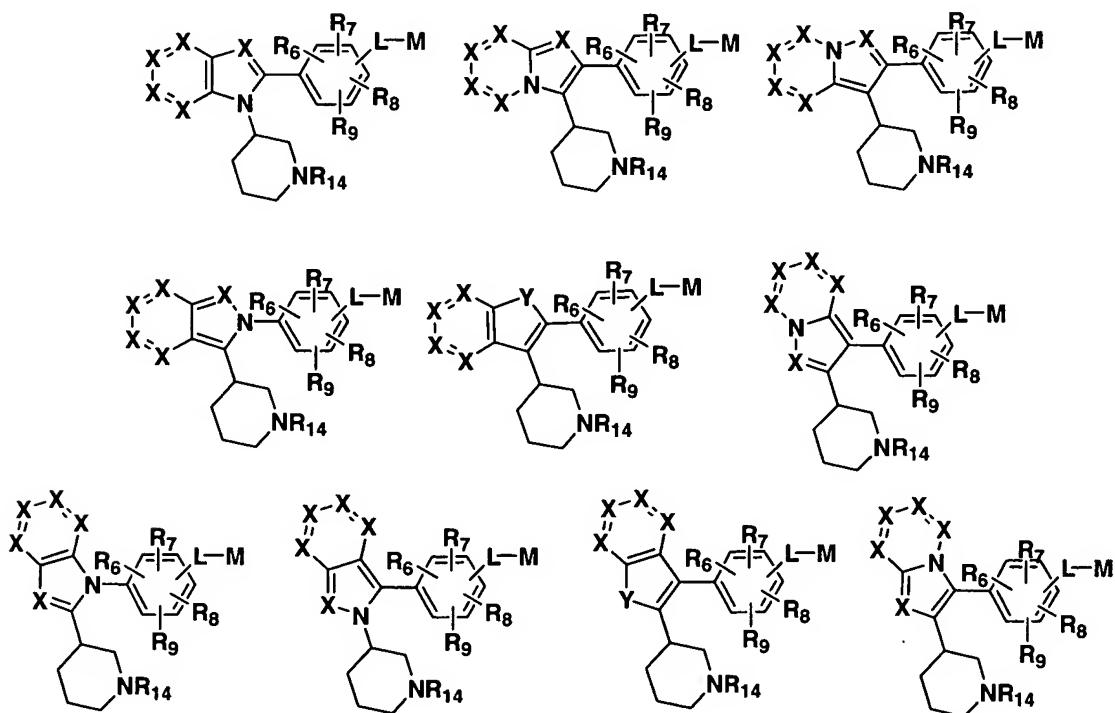


66. A compound according to claim 55, wherein M comprises a hydroxamic acid moiety.

67. A compound according to claim 55, wherein -L-M is



68. A compound comprising a formula selected from the group consisting of:



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted;

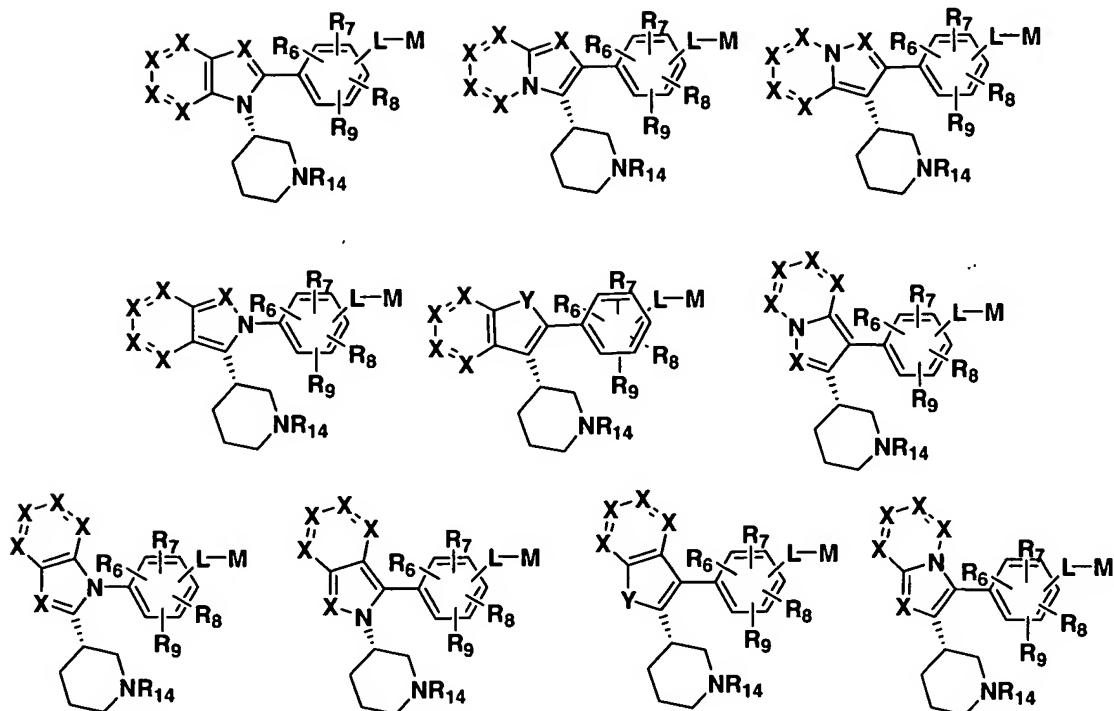
each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case where the ring atom to which R<sub>12</sub> is bound is nitrogen;

R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

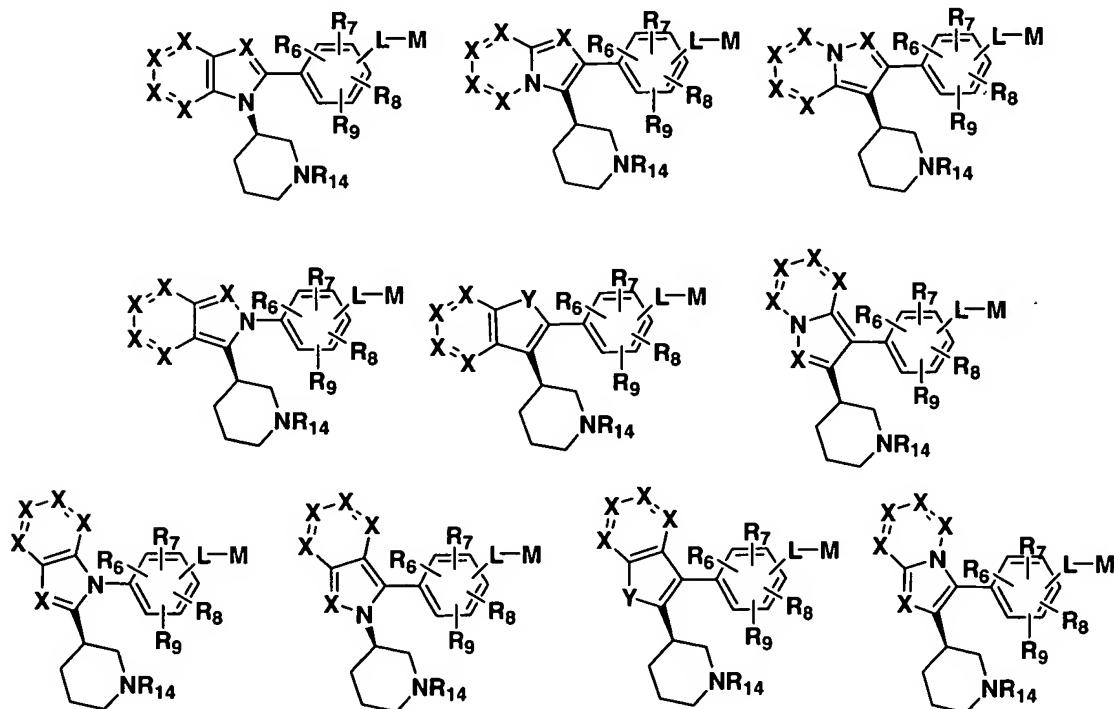
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between the M substituent and the ring.

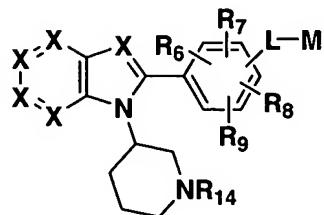
69. A compound according to claim 68, wherein the compound comprises a formula selected from the group consisting of



70. A compound according to claim 68, wherein the compound comprises a formula selected from the group consisting of



71. A compound according to claim 68, wherein the compound comprises the formula



72. A compound according to claim 68, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

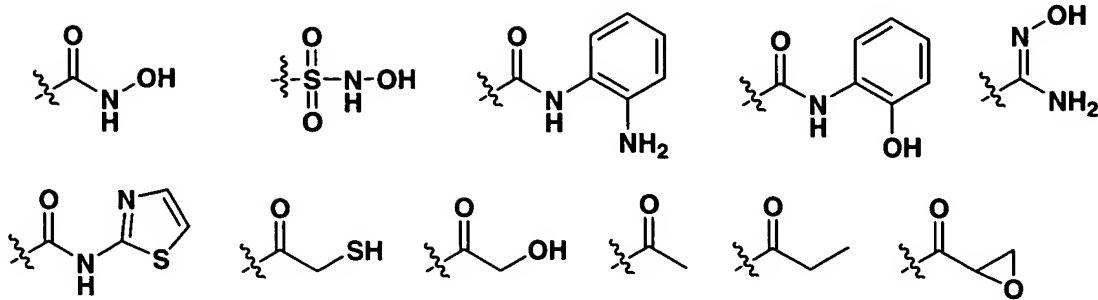
73. A compound according to claim 68, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

74. A compound according to claim 68, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

75. A compound according to claim 68, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

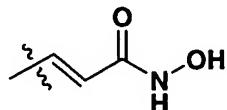
76. A compound according to claim 68, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

77. A compound according to claim 68, wherein M is selected from the group consisting of:



78. A compound according to claim 68, wherein M comprises a hydroxamic acid moiety.

79. A compound according to claim 68, wherein -L-M is

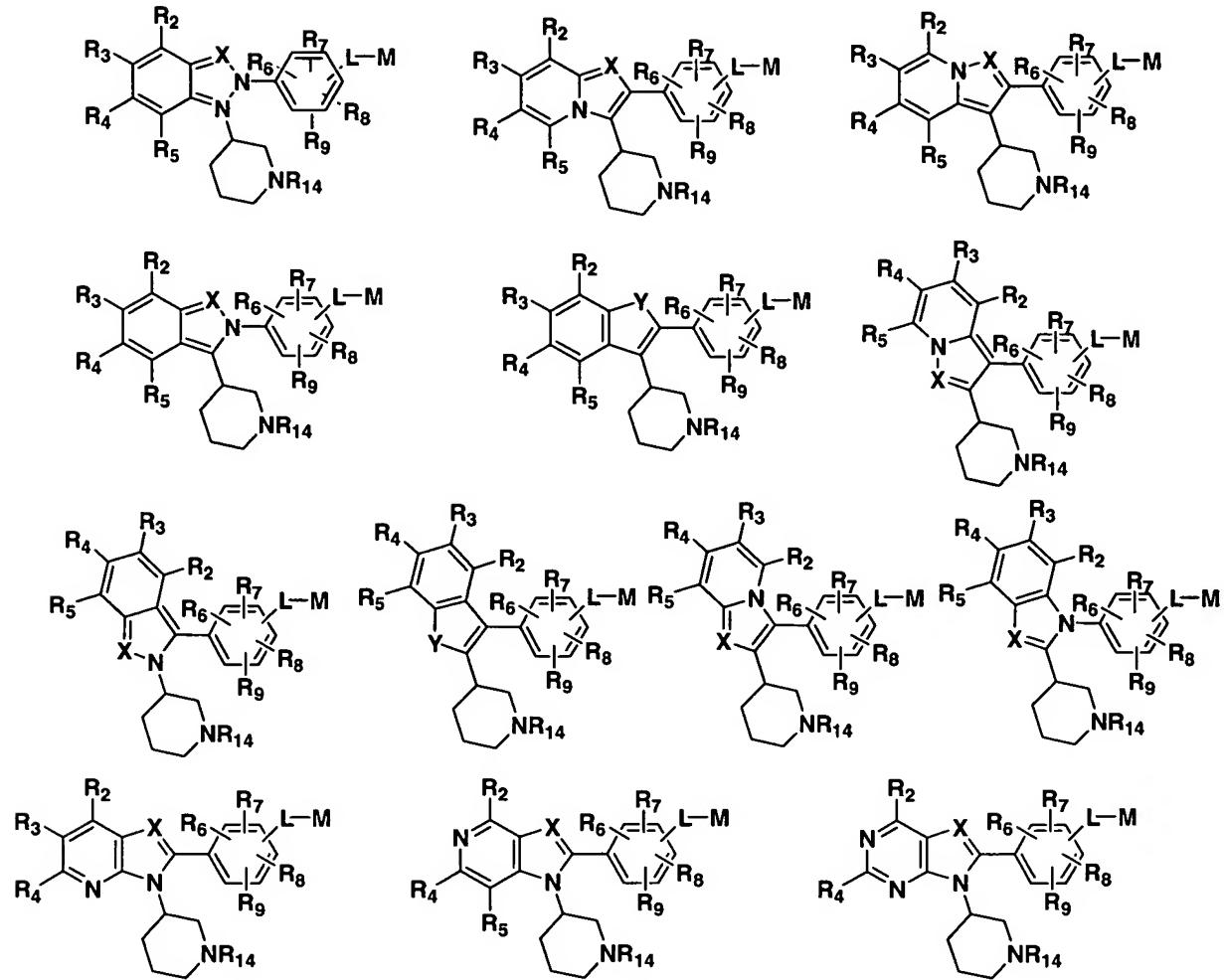


80. A compound according to claim 68, wherein at least one of R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> is fluorine.

81. A compound according to claim 68, wherein at least one X in the six membered ring is a substituted carbon atom.

82. A compound according to claim 68, wherein at least one of the X substituents in the six membered ring is -CF<sub>3</sub>.

83. A compound comprising a formula selected from the group consisting of:



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and  $NR_{12}$ ;

$R_2, R_3, R_4, R_5, R_6, R_7, R_8$ , and  $R_9$  are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted;

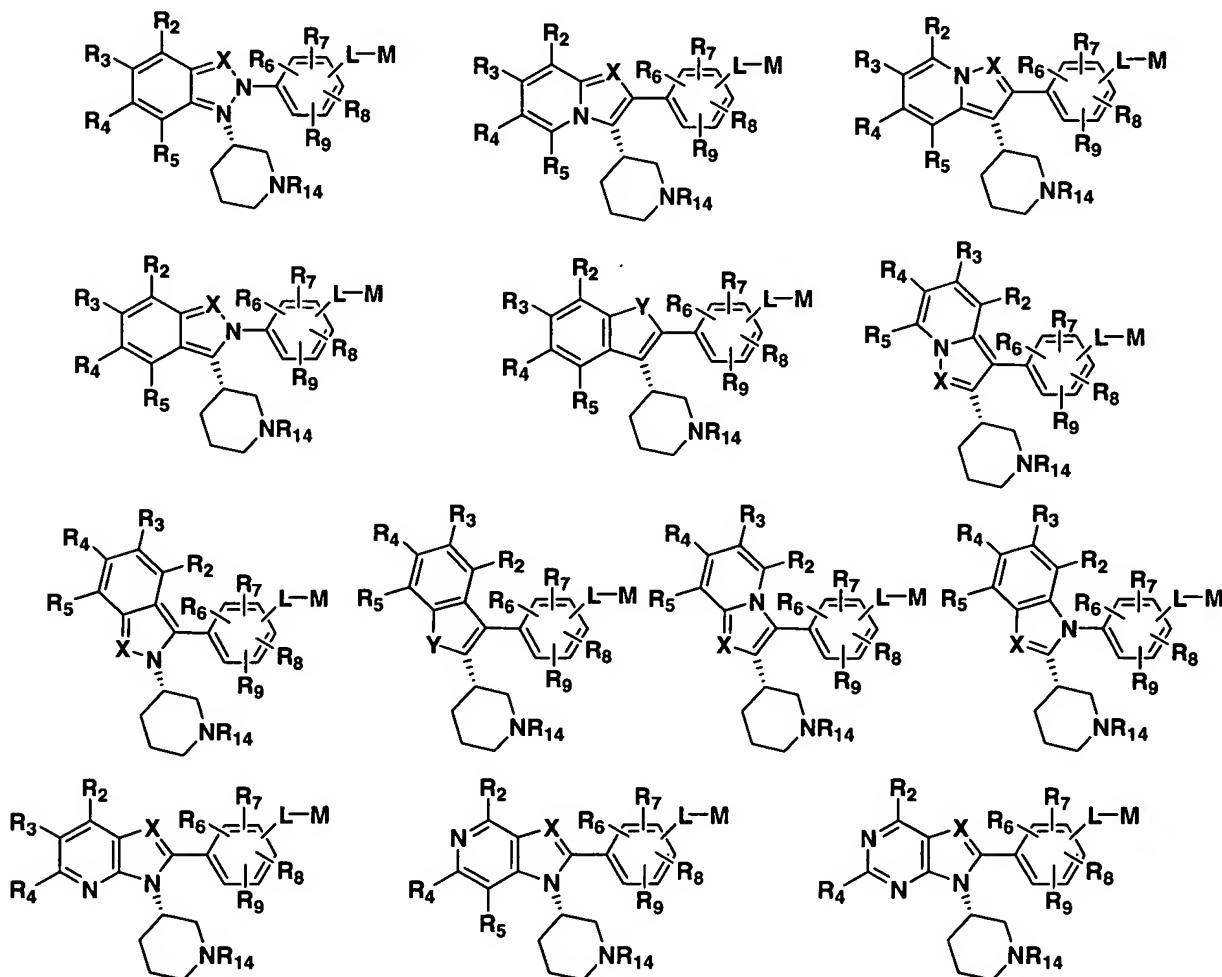
each  $R_{12}$  is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that  $R_{12}$  is not halo, cyano, nitro, and thio in the case where the ring atom to which  $R_{12}$  is bound is nitrogen;

$R_{14}$  is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroaryalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

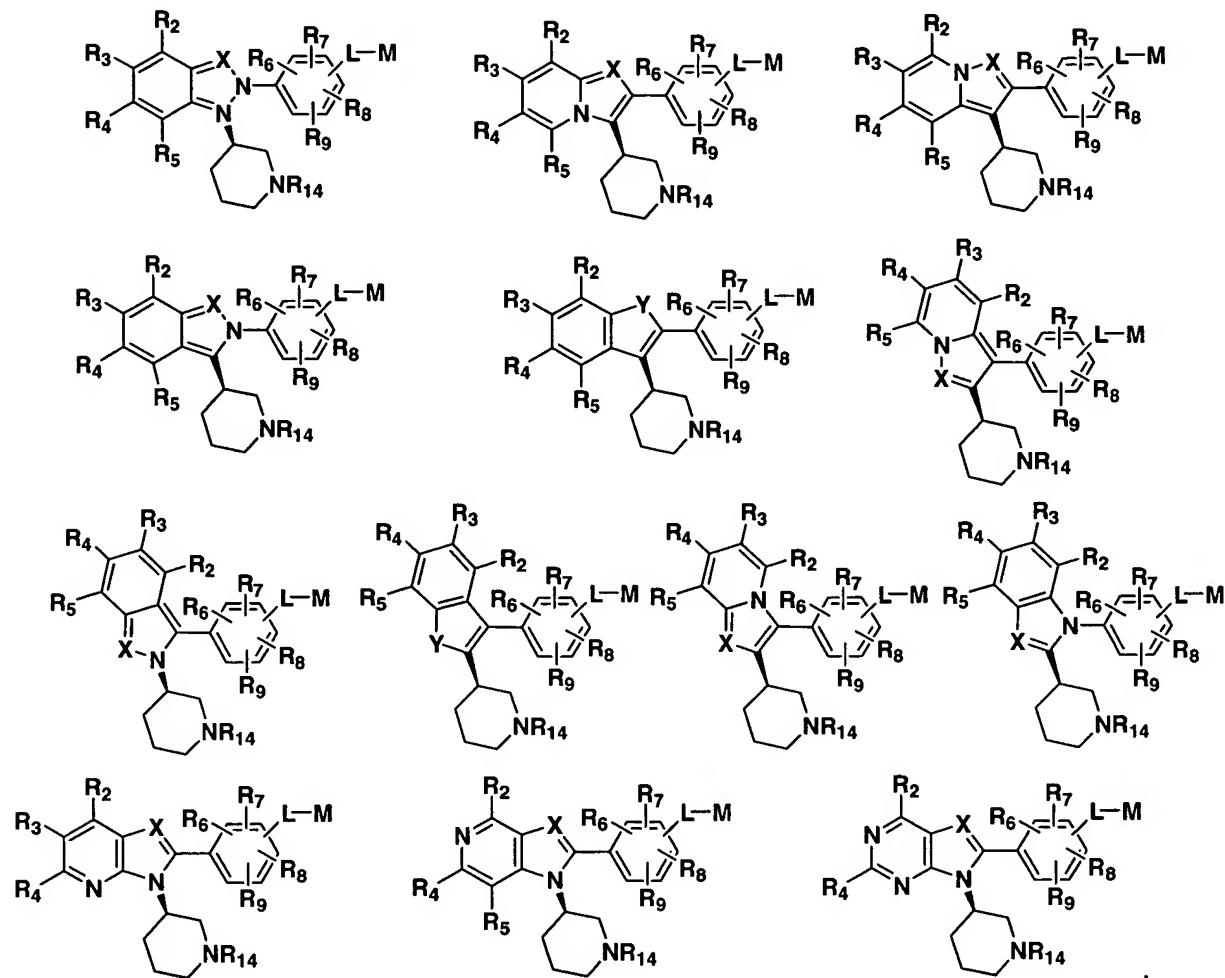
$M$  is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

$L$  is a substituent providing between 0-10 atoms separation between the  $M$  substituent and the ring.

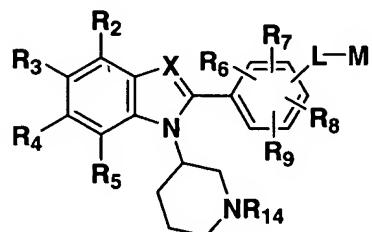
84. A compound according to claim 83, wherein the compound comprises a formula selected from the group consisting of



85. A compound according to claim 83, wherein the compound comprises a formula selected from the group consisting of



86. A compound according to claim 83, wherein the compound comprises the formula



87. A compound according to claim 83, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

88. A compound according to claim 83, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

89. A compound according to claim 83, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

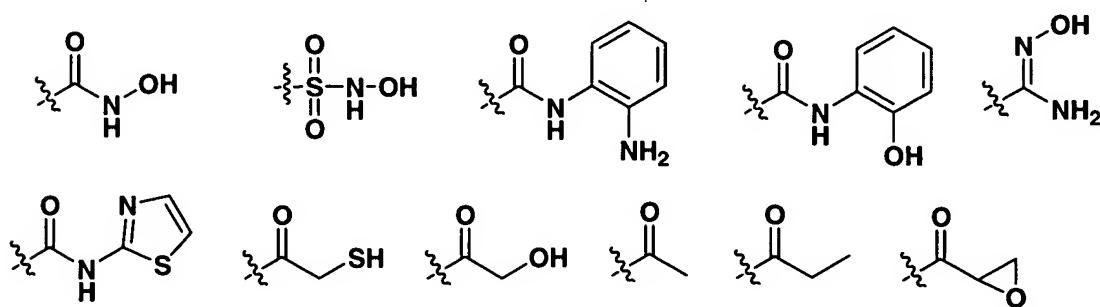
90. A compound according to claim 83, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

91. A compound according to claim 83, wherein at least one of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, or R<sub>5</sub> is fluorine.

92. A compound according to claim 83, wherein at least one of R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> is fluorine.

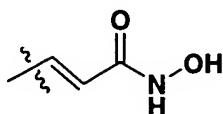
93. A compound according to claim 83, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

94. A compound according to claim 83, wherein M is selected from the group consisting of:



95. A compound according to claim 83, wherein M comprises a hydroxamic acid moiety.

96. A compound according to claim 83, wherein -L-M is

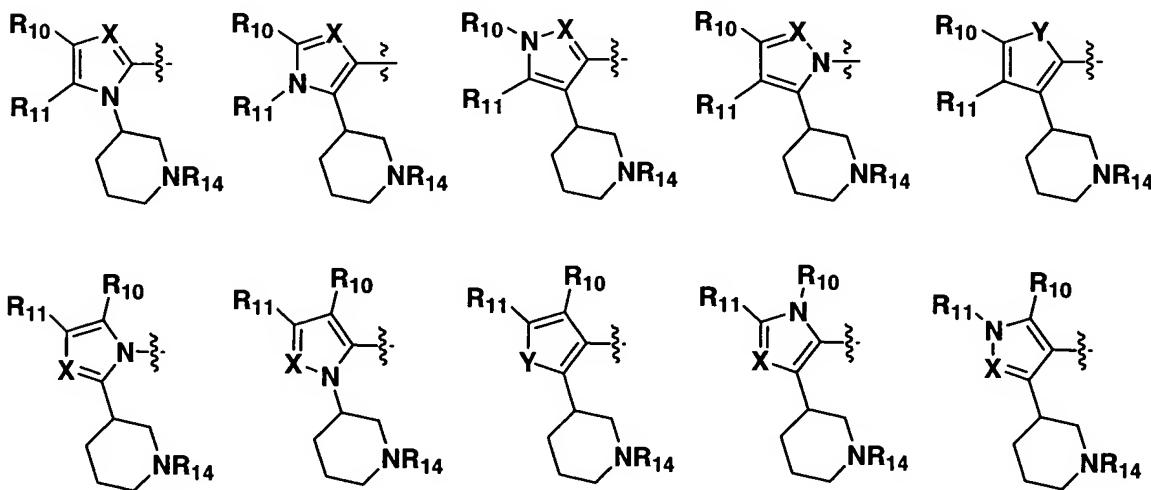


97. A compound comprising the formula



wherein

Z is selected from the group consisting of



wherein

each X is independently selected from the group consisting of CR<sub>12</sub> and N;

each Y is independently selected from the group consisting of O, S and NR<sub>12</sub>;

R<sub>10</sub> and R<sub>11</sub> are taken together to form a substituted or unsubstituted aromatic ring;

each R<sub>12</sub> is independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy,

heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted, with the proviso that R<sub>12</sub> is not halo, cyano, nitro, and thio in the case where the ring atom to which R<sub>12</sub> is bound is nitrogen;

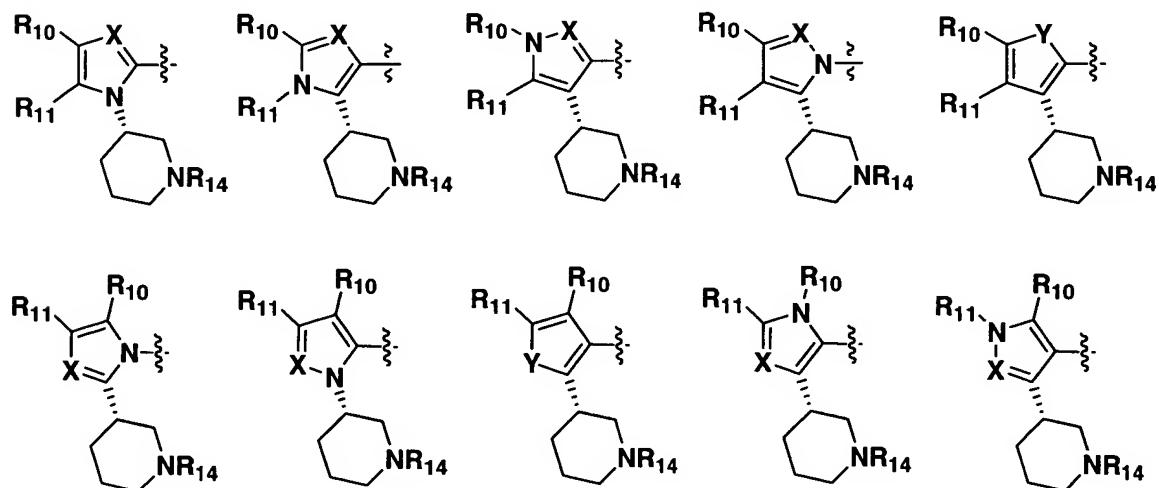
R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

Q is a substituted or unsubstituted aromatic ring;

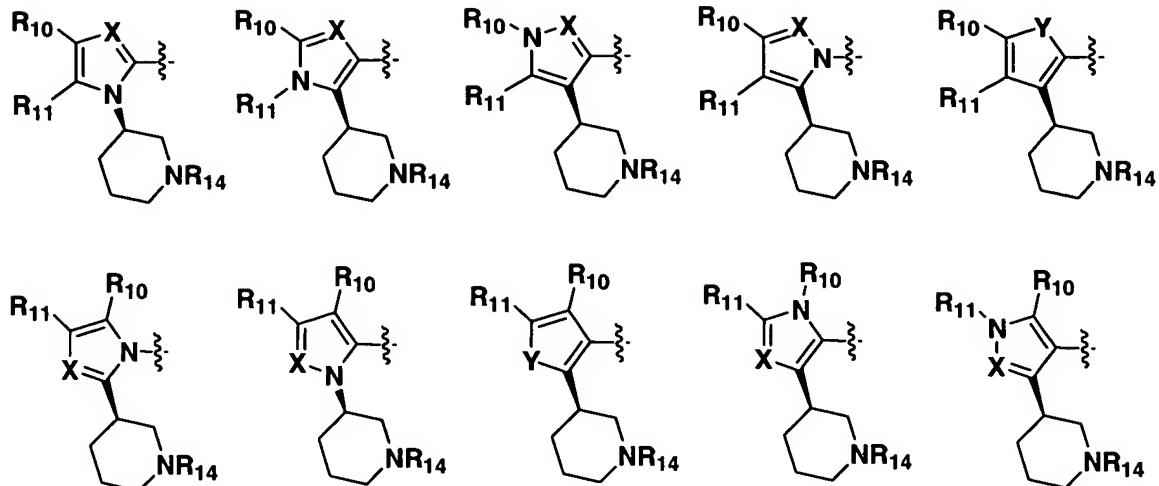
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 0-10 atoms separation between the M substituent and the Q substituent.

98. A compound according to claim 97, wherein the compound comprises a formula selected from the group consisting of



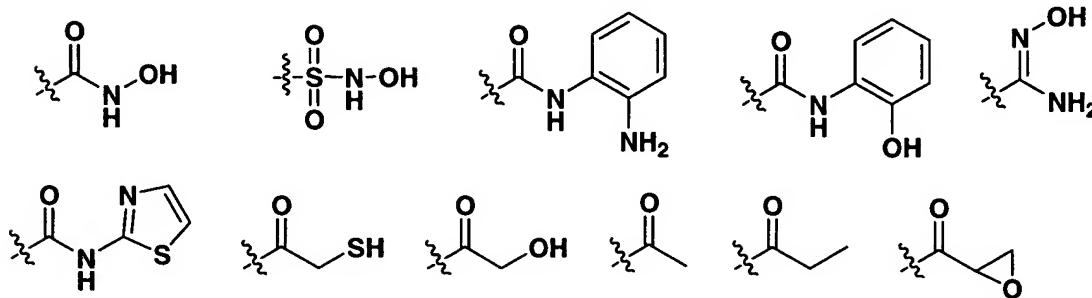
99. A compound according to claim 97, wherein the compound comprises a formula selected from the group consisting of



100. A compound according to claim 97, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.
101. A compound according to claim 97, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.
102. A compound according to claim 97, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.
103. A compound according to claim 97, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.
104. A compound according to claim 97, wherein the substituted or unsubstituted aromatic ring formed when R<sub>10</sub> and R<sub>11</sub> are taken together is selected from the group consisting of substituted or unsubstituted aryl and heteroaryl.
105. A compound according to claim 97, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having

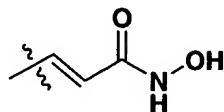
the formula  $-\text{C}(\text{O})-\text{R}_{13}$  wherein  $\text{R}_{13}$  is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

106. A compound according to claim 97, wherein M is selected from the group consisting of:

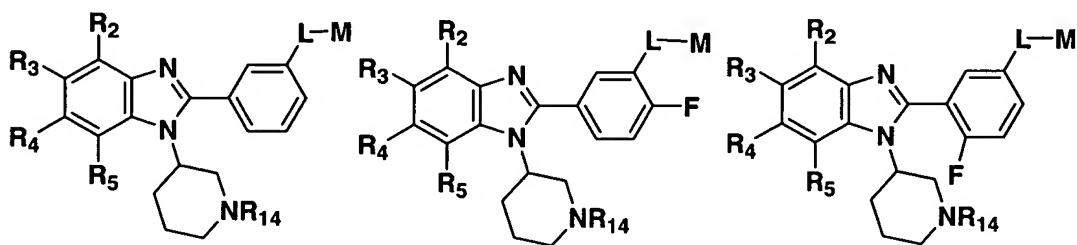


107. A compound according to claim 97, wherein M comprises a hydroxamic acid moiety.

108. A compound according to claim 97, wherein  $-\text{L}-\text{M}$  is



109. A compound comprising the formula



wherein

$\text{R}_2$ ,  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group,

113. A compound according to claim 109, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

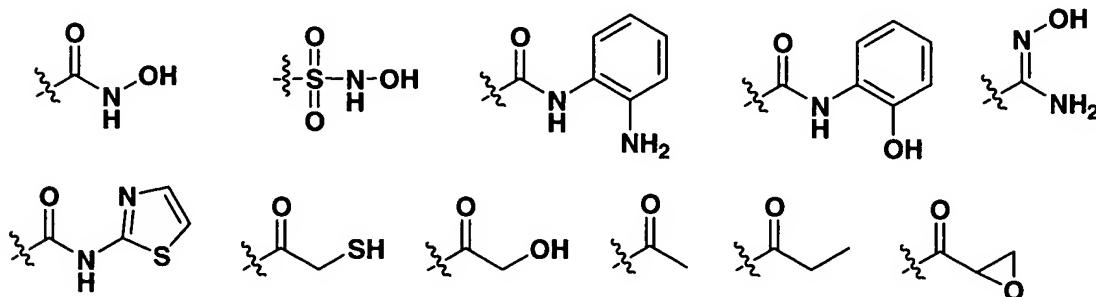
114. A compound according to claim 109, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

115. A compound according to claim 109, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

116. A compound according to claim 109, wherein at least one of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, or R<sub>5</sub> is fluorine.

117. A compound according to claim 109, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

118. A compound according to claim 109, wherein M is selected from the group consisting of:



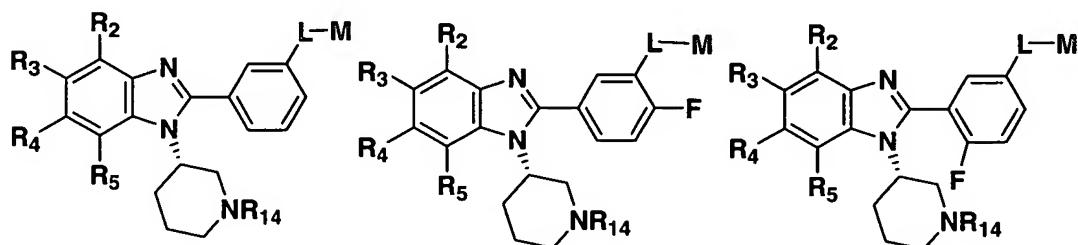
each substituted or unsubstituted;

$R_{14}$  is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

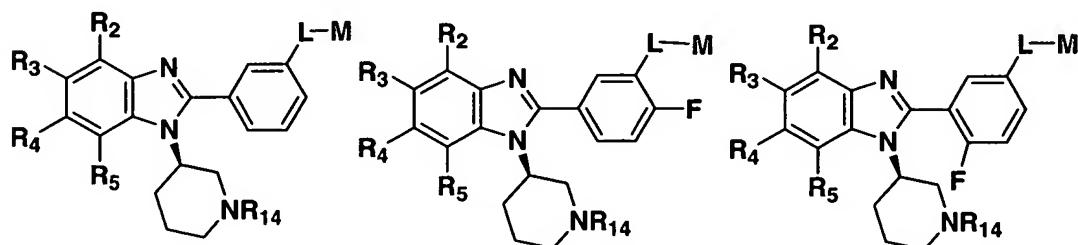
$M$  is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

$L$  is a substituent providing between 0-10 atoms separation between the  $M$  substituent and the remainder of the compound.

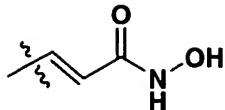
110. A compound according to claim 109, wherein the compound comprises a formula selected from the group consisting of



111. A compound according to claim 109, wherein the compound comprises a formula selected from the group consisting of



112. A compound according to claim 109, wherein  $R_{14}$  comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

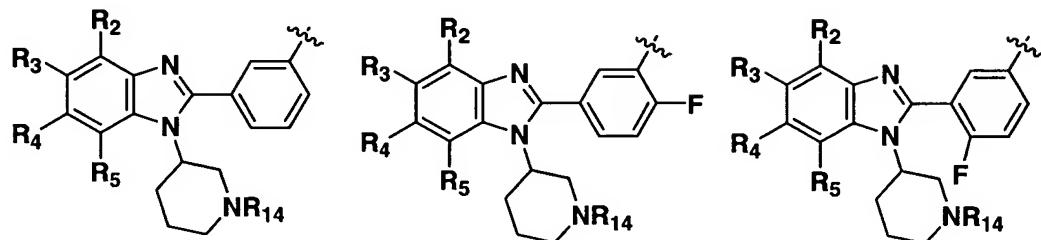


121. A compound comprising the formula:



wherein

Z-Q- is selected from the group consisting of



wherein

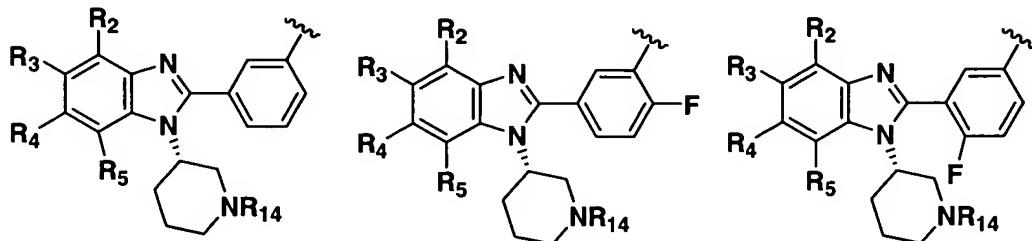
R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, and R<sub>5</sub> are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, thio, cyano, nitro, and a carbonyl group, each substituted or unsubstituted;

R<sub>14</sub> is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

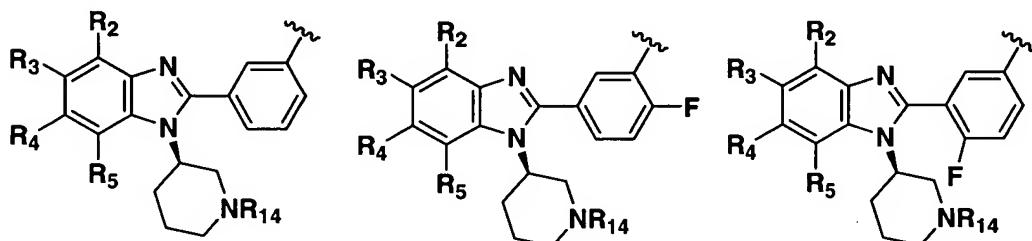
M is a substituent capable of complexing with a deacetylase catalytic site and/or a metal ion; and

L is a substituent providing between 2-10 atoms separation between the M substituent and the Q substituent.

122. A compound according to claim 121, wherein the compound comprises a formula selected from the group consisting of



123. A compound according to claim 121, wherein the compound comprises a formula selected from the group consisting of



124. A compound according to claim 121, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

125. A compound according to claim 121, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

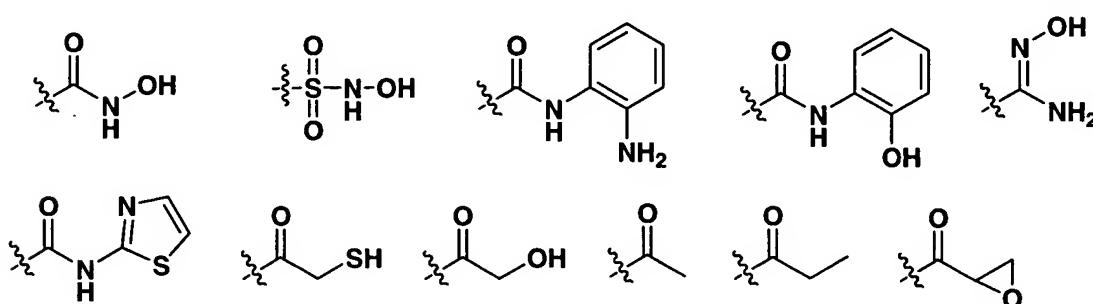
126. A compound according to claim 121, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

127. A compound according to claim 121, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

128. A compound according to claim 121, wherein at least one of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, or R<sub>5</sub> is fluorine.

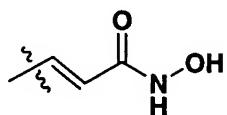
129. A compound according to claim 121, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

130. A compound according to claim 121, wherein M is selected from the group consisting of:

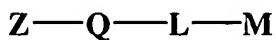


131. A compound according to claim 121, wherein M comprises a hydroxamic acid moiety.

132. A compound according to claim 121, wherein -L-M is

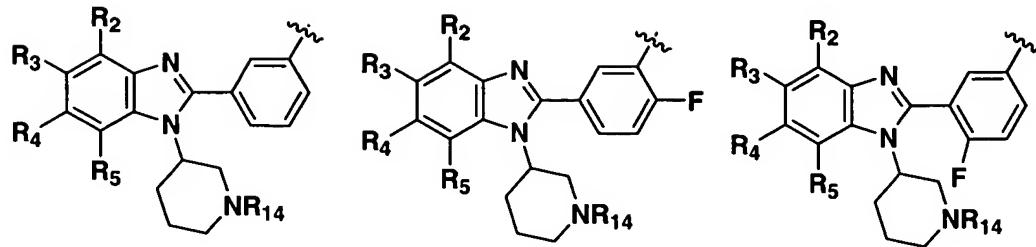


133. A compound comprising the formula:



wherein

Z-Q- is selected from the group consisting of

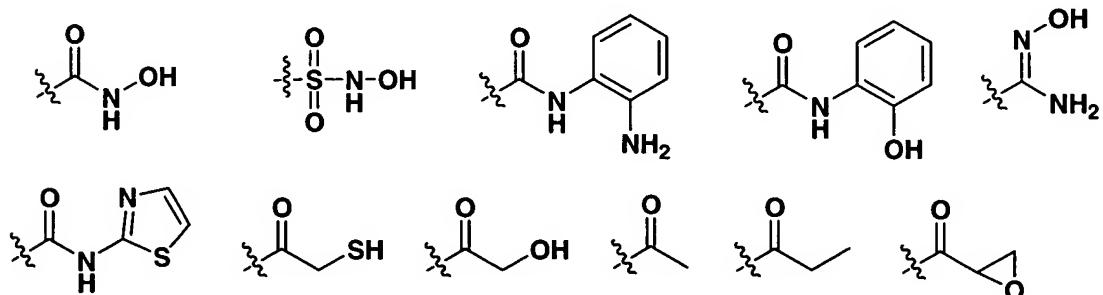


wherein

$R_2$ ,  $R_3$ ,  $R_4$ , and  $R_5$  are each independently selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, cyano, and nitro;

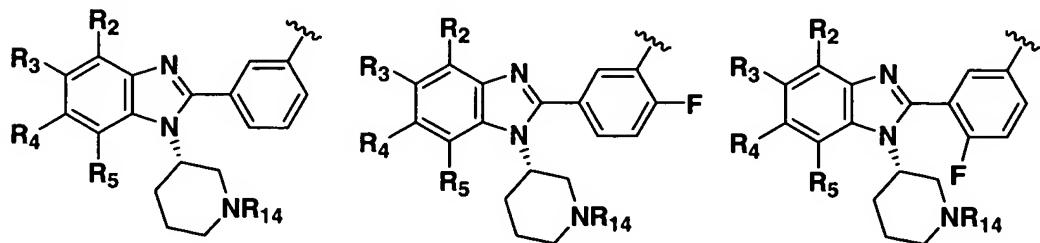
$R_{14}$  is selected from the group consisting of hydrogen, halo, alkyl, alkoxy, aryl, heteroaryl, aminosulfonyl, alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, aryloxy, heteroaryloxy, arylalkyl, heteroarylalkyl, amino, and a carbonyl group, each substituted or unsubstituted;

$M$  is selected from the group consisting of

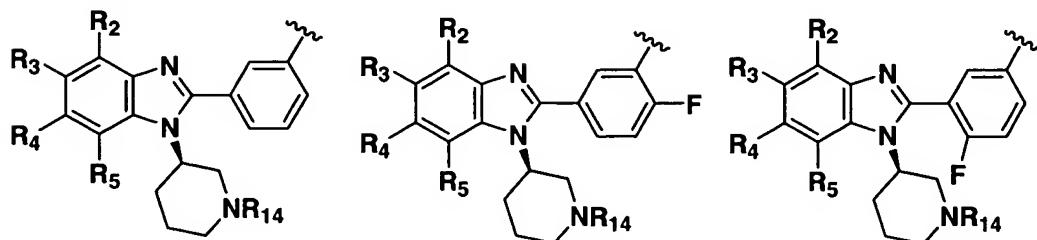


and  $L$  is  $E$ ,  $Z$  or mixtures of  $E/Z$  - $CH_2=CH_2$ -.

134. A compound according to claim 133, wherein the compound comprises a formula selected from the group consisting of



135. A compound according to claim 133, wherein the compound comprises a formula selected from the group consisting of



136. A compound according to claim 133, wherein R<sub>14</sub> comprises a member selected from the group consisting of hydrogen and a substituent that is convertible *in vivo* to hydrogen.

137. A compound according to claim 133, wherein R<sub>14</sub> is a substituted or unsubstituted C<sub>1-6</sub> alkyl.

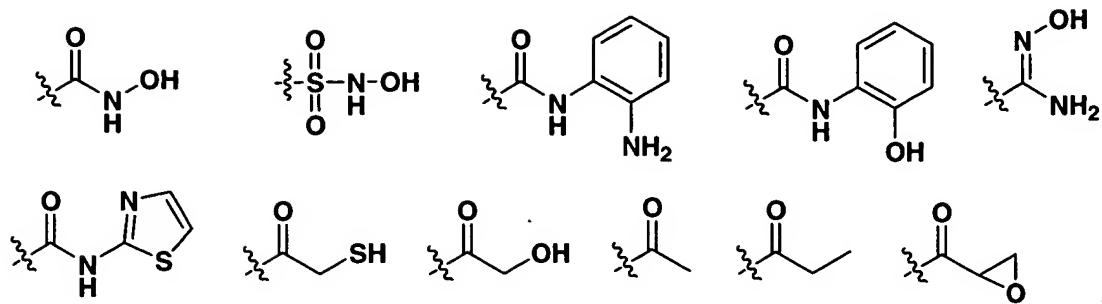
138. A compound according to claim 133, wherein R<sub>14</sub> is a substituted or unsubstituted -C(O)C<sub>1-6</sub> alkyl.

139. A compound according to claim 133, wherein R<sub>14</sub> is selected from the group consisting of H, methyl, ethyl, propyl, isopropyl, butyl, acetyl, and BOC.

140. A compound according to claim 133, wherein at least one of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, or R<sub>5</sub> is fluorine.

141. A compound according to claim 133, wherein M comprises a member selected from the group consisting of trifluoroacetyl (-C(O)-CF<sub>3</sub>), -NH-P(O)OH-CH<sub>3</sub>, sulfonamides (-SO<sub>2</sub>NH<sub>2</sub>), hydroxysulfonamides (-SO<sub>2</sub>NHOH), thiols(-SH), and carbonyl groups having the formula -C(O)-R<sub>13</sub> wherein R<sub>13</sub> is hydroxylamino, hydroxyl, amino, alkylamino, or an alkoxy group.

142. A compound according to claim 133, wherein M is selected from the group consisting of:



143. A compound according to claim 133, wherein M comprises a hydroxamic acid moiety.

144. A compound according to claim 133, wherein -L-M is

